

UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Eduardo Compains et al.  
Application Number: 10/582,927  
Filing Date: 05/14/2007  
Group Art Unit: 1712  
Examiner: Samuel A. Waldbaum  
Title: BELLOWS-TYPE COLLAR FOR WASHING MACHINES

Mail Stop Appeal Brief - Patents  
Commissioner for Patents  
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**REPLY BRIEF**

Pursuant to 37 CFR 41.41, Appellants hereby file a reply brief in response to the Examiner's Answer dated September 24, 2010, in the above-identified application, within the 2-month reply deadline.

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(1) REAL PARTY IN INTEREST

The real party in interest is BSH Bosch und Siemens Hausgeräte GmbH.

(2) RELATED APPEALS AND INTERFERENCES

There are no appeals or interferences that will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) STATUS OF CLAIMS

Claims 8-10 and 12-22 are pending in the present application. Claims 1-7 and 11 were canceled. Claim 20 has been indicated as being allowable. The final rejections of claims 8-10, 12-19, 21, and 22 are being appealed.

Claims 8 and 14 are independent.

(4) STATUS OF AMENDMENTS

There are no outstanding Amendments.

An Office Action dated May 6, 2010, reopened prosecution after the filing of the Appeal Brief and fee, but prior to a final decision from the Board of Patent Appeals.

(5) SUMMARY OF CLAIMED SUBJECT MATTER

An exemplary embodiment of the present invention, as recited by, for example, independent claim 8, is directed to a bellows-type collar for washing machines comprising  
a machine housing (e.g., 1)(e.g., see page 5, lines 28-29),  
a lye container (e.g., 2) that is arranged therein (e.g., see page 5, lines 28-29),

a cantilevered drum (e.g., 3) which is rotatably disposed in the lye container (e.g., 2) (e.g., see page 5, line 28, to page 6, line 5), and  
a frontal loading opening (e.g., 6) (e.g., see page 6, lines 7-9),  
wherein the bellows-type collar (e.g., 20) (e.g., see page 8, lines 4-5) comprises  
an inner (e.g., 21) (e.g., see page 8, lines 5-7),  
a central (e.g., 22) (e.g., see page 8, lines 5-7), and  
an outer collar ring (e.g., 23) (e.g., see page 8, lines 5-7), and is sealingly fixed  
to both the machine housing (e.g., 1) and the lye container (e.g., 2) in the area of the  
loading opening (e.g., 6) (e.g., see page 8, lines 8-10), and  
the inner collar ring (e.g., 21) is visible through a closure of the loading  
opening (e.g., 6) (e.g., see page 8, line 6),

wherein an annular stiffening element (e.g., 28) comprising a thickened area of  
the bellows-type collar (e.g., 20) is assigned to the visible inner collar ring (e.g., 21),  
which stiffening element (e.g., 28) reduces any spreading of deformation forces from  
the central (e.g., 22) and outer collar ring (e.g., 23) on to the inner collar ring (e.g., 21)  
(e.g., see page 8, lines 14-26), and

a non-visible section (e.g., 22, 23, 25, 27, 29, 30) of the bellows-type collar  
(e.g., 20) (e.g., see page 8, lines 6-7, 23-26, and 28-29),

wherein an articulated section (e.g., 29) is disposed in the non-visible section  
(e.g., 22, 23, 25, 27, 29, 30) which promotes deformation of the bellows-type collar  
(e.g., 20) in said non-visible section (e.g., 22, 23, 25, 27, 29, 30) (e.g., see page 8, lines  
28-31, and page 9, lines 5-8).

An exemplary embodiment of the present invention, as recited by, for example, claim  
9, recites wherein a flexible metal ring is vulcanized at least one of on and in the bellows-type  
collar (e.g., 20) (e.g., see page 9, lines 25-27).

An exemplary embodiment of the present invention, as recited by, for example, claim  
10, recites wherein the stiffening element (e.g., 28) is disposed in the area of the inner collar  
ring (e.g., 21) which lies closest to the drum neck (e.g., 13) of the drum (e.g., 3) (e.g., see page  
9, lines 16-23).

An exemplary embodiment of the present invention, as recited by, for example, claim 12, recites wherein the articulated section (e.g., 29) is formed by a thinner-material area between two thickened areas (e.g., 28, 30) of the bellows-type collar (e.g., 20) (e.g., see page 8, lines 14-18).

An exemplary embodiment of the present invention, as recited by, for example, claim 13, recites wherein the articulated section (e.g., 29) in the non-visible section (e.g., 22, 23, 25, 27, 29, 30) of the bellows-type collar directly adjoins the stiffening element (e.g., 28) (e.g., see page 8, lines 28-29).

Another exemplary embodiment of the present invention, as recited by, for example, independent claim 14, is directed to a washing machines comprising:

- a housing (e.g., 1) (e.g., see page 5, lines 28-29);

- a lye container (e.g., 2) supported within the housing (e.g., 1) (e.g., see page 5, lines 28-29);

- a cantilevered drum (e.g., 3) disposed within the lye container (e.g., 2) and mounted for rotation with respect to the lye container (e.g., 2) (e.g., see page 5, line 28, to page 6, line 5); and

- a frontal loading opening (e.g., 6) in the housing (e.g., 1) providing access to the drum (e.g., 3) (e.g., see page 6, lines 7-9); and

- a bellows-type collar (e.g., 20) at least partially surrounding the frontal loading opening (e.g., 6), the bellows-type collar (e.g., 20) (e.g., see page 8, lines 4-5) comprising:

- an inner collar ring (e.g., 21) including an inner fixed edge (e.g., 26) coupled to the housing (e.g., 1) and extending inwardly toward the drum (e.g., 3) to an inner free edge (e.g., 24) (e.g., see page 8, lines 5-7);

- an outer collar ring (e.g., 23) disposed radially outwardly from the inner collar ring (e.g., 21) and including an outer fixed edge (e.g., 27) sealingly coupled to the lye container (e.g., 2) and extending outwardly toward the housing (e.g., 1) to an outer free edge (e.g., 25) (e.g., see page 8, lines 5-7);

a central collar ring (e.g., 22) extending between the inner free edge (e.g., 24) and the outer free edge (e.g., 25) (e.g., see page 8, lines 5-7); and

an annular stiffening element (e.g., 28) including an articulated section (e.g., 29) disposed near the inner free edge (e.g., 24) and restricting the spread of deformation forces from the central (e.g., 22) and outer collar ring (e.g., 23) on to the inner collar ring (e.g., 21) (e.g., see page 8, lines 14-26 and 28-31, and page 9, lines 5-8).

An exemplary embodiment of the present invention, as recited by, for example, claim 15, recites wherein the annular stiffening element includes a nose (e.g., 28) with a thickened area disposed at the inner free edge (e.g., 24) near the intersection of the inner collar ring (e.g., 21) and the central collar ring (e.g., 22), at least a portion of the inner collar ring (e.g., 21) having a thickness being less than the thickness of the nose (e.g., 28) (e.g., see page 8, lines 14-26).

An exemplary embodiment of the present invention, as recited by, for example, claim 16, recites wherein the thickened area of the nose (e.g., 28) extends radially outwardly from the inner collar ring (e.g., 21) providing the inner collar ring (e.g., 21) with a radially inwardly facing surface being substantially uniform and uninterrupted (e.g., see page 8, lines 14-26).

An exemplary embodiment of the present invention, as recited by, for example, claim 17, recites wherein the annular stiffening element (e.g., 28, 30) includes a bead (e.g., 30) disposed on the central collar ring (e.g., 21), and wherein the articulated section (e.g., 29) is disposed between the bead (e.g., 30) and the nose (e.g., 28), the thickness of the bead (e.g., 30) being greater than the thickness of the articulated section (e.g., 29) (e.g., see page 8, lines 17-18 and 28-31, and page 9, lines 1-14).

An exemplary embodiment of the present invention, as recited by, for example, claim 18, recites wherein the thickness of the nose (e.g., 28) is greater than the thickness of the articulated section (e.g., 29) (e.g., see page 8, lines 14-18).

An exemplary embodiment of the present invention, as recited by, for example, claim 19, recites wherein at least a portion of the central collar ring (e.g., 21) disposed between the

bead (e.g., 30) and the outer free edge (e.g., 24) includes a thickness being less than the thickness of the bead (e.g., 30)(e.g., see page 8, lines 20-26).

An exemplary embodiment of the present invention, as recited by, for example, claim 21, recites wherein the inner collar ring (e.g., 21) and outer collar ring (e.g., 23) extend in directions substantially parallel to one another and the central collar ring (e.g., 22) extends in a direction substantially diagonal with respect to the inner (e.g., 21) and outer collar rings (e.g., 23)(e.g., see page 8, lines 4-12; see Fig. 2).

An exemplary embodiment of the present invention, as recited by, for example, claim 22, recites wherein the bellows-type collar (e.g., 20) includes a flexible vulcanized metal ring is vulcanized(e.g., see page 9, lines 25-27).

In conventional washing machines, any deformation of the collar, especially the inner collar ring, is clearly visible during spinning, which results in an ugly impression and may result in the user having the impression that the washing machine is not working correctly and cannot cope with the load of laundry. In addition, the creasing of the inner collar ring may result in noise known as so-called collar flapping occurring in the immediate vicinity of the transparent container, which may be disturbing to the user.

In stark contrast, the present invention provides an annular stiffening element to the visible inner collar ring, which reduces any spreading of deformation forces from the central and outer collar ring on to the inner collar ring, thereby reducing the deformation of the bellows-type collar visible to the user and reducing the accompanying noise during the operating state of a washing machine. See, e.g., page 2, lines 1-26.

(6) GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

- a. Whether claims 8, 10-16, and 21 are anticipated under 35 U.S.C. 102(b) by the Kim et al reference (U.S. Pub. No. 2004/0103693).
- b. Whether claims 17-19 are unpatentable under 35 U.S.C. 103(a) the Kim et al reference.

- c. Whether claims 9 and 22 are unpatentable under 35 U.S.C. § 103(a) over the Kim et al reference and further in view of the Deuring reference (U.S. Patent No. 4,826,180).

(7) ARGUMENT

- a. Claims 8, 10-16, and 21 are NOT anticipated under 35 U.S.C. 102(b) by the Kim et al reference (U.S. Pub. No. 2004/0103693).

Claims 8, 10-16, and 21 are rejected under 35 U.S.C. § 102(b) as being anticipated by the Kim et al reference.

Appellants respectfully traverse this rejection.

Contrary to the assertions in the Office Action, Appellants respectfully submit that the Kim et al reference very clearly does not disclose all of the features of claims 8, 10-16, and 21.

A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. [...] The identical invention must be shown in as complete detail as is contained in the ... claim." M.P.E.P. § 2131.

Independent claims 8 and 14:

Independent claim 8 recites wherein an annular stiffening element comprising a thickened area of the bellows-type collar is assigned to the visible inner collar ring, which stiffening element reduces any spreading of deformation forces from the central and outer collar ring on to the inner collar ring, and a non-visible section of the bellows-type collar, wherein an articulated section is disposed in the non-visible section which promotes deformation of the bellows-type collar in said non-visible section.



Similarly, independent claim 14 recites a bellows-type collar at least partially surrounding the frontal loading opening, the bellows-type collar comprising an annular stiffening element including an articulated section disposed near the inner free edge and restricting the spread of deformation forces from the central and outer collar ring on to the inner collar ring.

Regarding claims 8 and 14, the Office Action asserts that the Kim et al. reference discloses an annular stiffening element (fig. 5, part 532) comprising a thickening area (fig. 4 & 5, part 532, is a thickening of the end of the inner visible collar closes to the lye container) reducing the deformation of the collar ([0075] & [0081]). The Office Action asserts that the Kim et al. reference teaches a non-visible section of the bellow type collar (fig. 4 & 5, the central collar is non-visible) with an articulated section disposed on that non-visible section. Particularly, the Office Action asserts, in view of page 11 of Appellants appeal brief, paragraph 4, lines 8 and 9, Appellant defines articulated section as "two parts are joined to each other in a way that these parts may swivel relative to each other at the articulation", the Kim et al. reference allegedly teaches that the articulated section is the section of the non-visible central collar that meets up at the annular stiffening element of the inner visible section, see fig. 5, [0067]-[0070], and furthermore, there is also a second articulated section where the central ring meets up with the outer ring, creating the bending joint.

Contrary to the assertions in the Office Action, Appellants respectfully submit that the Kim et al reference very clearly does not disclose these features, and indeed, does not disclose an articulated section according to the claimed invention. With reference to Figure 2, the present application describes an articulated section as a joint between two relatively stiff members in which the two relatively stiff members may swivel relative to each other at the articulation joint. See, e.g., paragraph [015]. Hence, the articulated section can localize the swivel movement or articulation between the relatively stiff members at the joint, rather than spreading out the movement across the annular stiffening element as a whole. See, e.g., page 2, lines 17-19; paragraph [006].

The Kim et al. reference clearly fails to disclose these features. Appellants respectfully submit that, at best, the Kim et al. reference discloses a collar that undergoes deformation as a whole, similar to the conventional art described in the present application.

In stark contrast to the claimed invention, and as clearly shown in Fig. 5, the Kim et al reference discloses an annular stiffening element 531 that is disposed on the outer collar ring 513, while a nose 532 is disposed on the inner collar ring 511. The annular stiffening element 531 clearly is separated from the nose 532 by the entire central collar ring 512, which includes a bend connecting the central collar ring 512 to the outer collar ring 513. Neither the nose 532 nor the annular stiffening element 531 are large enough, or positioned with respect to each other, such that any movement of the collars is isolated or localized to a particular location of the collar. Rather, one of ordinary skill in the art will recognize that the collar of the Kim et al. reference clearly can move at a variety of locations along the whole collar, including the inner, outer, and central collars 510, 512, 513, and the bend between the central and outer collars 512, 513.

The Kim et al reference teaches annular stiffening elements 531, which are located either within the inner collar 511 or within the outer collar 513. The annular stiffening elements 531 do not reduce or prevent the spreading of deformation forces from the central and outer collar ring on to the inner collar ring. In the first instance, the annular stiffening elements 531 cannot act to keep deformation from spreading from the central collar 512 and outer collar 513 to the inner collar 511 because they are disposed within the inner collar 511. In the second instance, the annular stiffening element 531 cannot reduce or prevent the spreading of deformation forces from the central collar 512 and outer collar 513 to the inner collar 511 because it is located on the outer collar 513, far away from the central collar 512 and inner collar 511. Thus, the Kim et al reference clearly does not prevent or contemplate preventing the spreading of deformation forces from the central and outer collar ring on to the inner collar ring, as in the present invention.

Hence, the collar of the Kim et al. reference clearly spreads or evenly distributes the movement of the collar over the collar as a whole, rather than localizing the movement of the

collar to an articulated section, as in the claimed invention. See, e.g., specification at paragraphs [006] and [015].

The claimed invention localizes the movement to the articulated section and promotes deformation of the collar in the non-visible section. In stark contrast, the Kim et al. reference specifically explains that the collar 510, as a whole (including the visible portion), is formed from a flexible material and *is bent* to prevent shocks from being transferred to the cabinet from the tub. See, e.g., paragraphs [0066], [0068], and [0069].

Thus, the Kim et al reference very clearly does not disclose all of the features of claims 8 and 14.

The Examiner's Answer dated September 24, 2010

The Examiner's Answer asserts that the features being relied upon are not recited in the claims. Contrary to the assertions in the Examiner's Answer, independent claims 8 and 14 clearly recite an articulated section. The term 'articulated section' is described in the present application as a joint between two relatively stiff members in which the two relatively stiff members may swivel relative to each other at the articulation joint. Hence, the articulated section can localize the swivel movement or articulation between the relatively stiff members at the joint, rather than spreading out the movement across the annular stiffening element as a whole. See, e.g., paragraphs [006], [015], and [029] - [031].

As explained above, the Kim et al. reference clearly fails to disclose these features. At best, the Kim et al. reference discloses a collar that undergoes deformation as a whole, similar to the conventional art described in the present application. In stark contrast to the claimed invention, as clearly shown in Fig. 5, the Kim et al reference discloses an annular stiffening element 531 that is disposed on the outer collar ring 513, while a nose 532 is disposed on the inner collar ring 511. The annular stiffening element 531 clearly is separated from the nose 532 by the entire central collar ring 512, which includes a bend connecting the central collar ring 512 to the outer collar ring 513. Neither the nose 532 nor the annular stiffening element 531 are large enough, or positioned with respect to each other, such that any movement of the collars is isolated or localized to a particular location of the collar. Rather, one of ordinary

skill in the art will recognize that the collar of the Kim et al. reference clearly can move at a variety of locations along the whole collar, including the inner, outer, and central collars 510, 512, 513, and the bend between the central and outer collars 512, 513.

The Kim et al reference teaches annular stiffening elements 531, which are located either within the inner collar 511 or within the outer collar 513. The annular stiffening elements 531 do not reduce or prevent the spreading of deformation forces from the central and outer collar ring on to the inner collar ring. In the first instance, the annular stiffening elements 531 cannot act to keep deformation from spreading from the central collar 512 and outer collar 513 to the inner collar 511 because they are disposed within the inner collar 511. In the second instance, the annular stiffening element 531 cannot reduce or prevent the spreading of deformation forces from the central collar 512 and outer collar 513 to the inner collar 511 because it is located on the outer collar 513, far away from the central collar 512 and inner collar 511. Thus, the Kim et al reference clearly does not prevent or contemplate preventing the spreading of deformation forces from the central and outer collar ring on to the inner collar ring, as in the present invention.

The collar of the Kim et al. reference clearly spreads or evenly distributes the movement of the collar over the collar as a whole, rather than localizing the movement of the collar to an articulated section, as in the claimed invention. The claimed invention localizes the movement to the articulated section and promotes deformation of the collar in the non-visible section. In stark contrast, the Kim et al. reference specifically explains that the collar 510, as a whole (including the visible portion), is formed from a flexible material and *is bent* to prevent shocks from being transferred to the cabinet from the tub. See, e.g., paragraphs [0066], [0068], and [0069].

Thus, the Kim et al reference very clearly does not disclose all of the features of claims 8 and 14.

Appellants respectfully request withdrawal of this rejection.

Claims 10-16 and 21:

Appellants respectfully submit that claims 10-16 and 21 are patentable over the Kim et al. reference by virtue of their dependency from claims 8 and 14, respectively, as well as for the additional features recited therein which are not disclosed by the Kim et al. reference.

For example, the Kim et al. reference fails to disclose wherein the articulated section is formed by a thinner-material area between two thickened areas of the bellows-type collar, as recited by claim 12, or wherein the articulated section in the non-visible section of the bellows-type collar directly adjoins the stiffening element, as recited by claim 13. Instead, as explained above, the Kim et al reference discloses an annular stiffening element 531 that is disposed on the outer collar ring 513, while a nose 532 is disposed on the inner collar ring 511. The annular stiffening element 531 clearly is separated from the nose 532 by the entire central collar ring 512, which includes a bend connecting the central collar ring 512 to the outer collar ring 513.

Thus, the Kim et al reference very clearly does not disclose all of the features recited by claims 10-16 and 21.

The Examiner's Answer dated September 24, 2010

The Examiner's Answer asserts that the Kim et al reference teaches an articulated section located between the thickening elements (532 and 531 in Fig. 5) and that the articulated section is formed at the point where the inner collar ring meets the annular stiffening element, part 532, and therefore, that the articulated section of thinner material is located between the two thickening elements.

As explained above, the term 'articulated section' is described in the present application as a joint between two relatively stiff members in which the two relatively stiff members may swivel relative to each other at the articulation joint. Hence, the articulated section can localize the swivel movement or articulation between the relatively stiff members at the joint, rather than spreading out the movement across the annular stiffening element as a whole. See, e.g., paragraphs [006], [015], and [029] - [031].

The Kim et al. reference clearly fails to disclose these features. At best, the Kim et al. reference discloses a collar that undergoes deformation as a whole, similar to the conventional art described in the present application. In stark contrast to the claimed invention, the Kim et al reference discloses an annular stiffening element 531 that is disposed on the outer collar ring 513, while a nose 532 is disposed on the inner collar ring 511. The annular stiffening element 531 clearly is separated from the nose 532 by the entire central collar ring 512, which includes a bend connecting the central collar ring 512 to the outer collar ring 513. Neither the nose 532 nor the annular stiffening element 531 are large enough, or positioned with respect to each other, such that any movement of the collars is isolated or localized to a particular location of the collar. Rather, one of ordinary skill in the art will recognize that the collar of the Kim et al. reference clearly can move at a variety of locations along the whole collar, including the inner, outer, and central collars 510, 512, 513, and the bend between the central and outer collars 512, 513.

The collar of the Kim et al. reference clearly spreads or evenly distributes the movement of the collar over the collar as a whole, rather than localizing the movement of the collar to an articulated section, as in the claimed invention. The claimed invention localizes the movement to the articulated section and promotes deformation of the collar in the non-visible section. In stark contrast, the Kim et al. reference specifically explains that the collar 510, as a whole (including the visible portion), is formed from a flexible material and *is bent* to prevent shocks from being transferred to the cabinet from the tub. See, e.g., paragraphs [0066], [0068], and [0069].

Appellants respectfully request withdrawal of these rejections.

- b. Claims 17-19 are NOT unpatentable under 35 U.S.C. § 103(a) over the Kim et al reference.

Claims 17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over the Kim et al reference.

Appellants respectfully traverse this rejection.

The Kim et al reference fails to disclose or suggest the features of the claimed invention wherein the annular stiffening element includes a bead disposed on the central collar ring, and wherein the articulated section is disposed between the bead and the nose, the thickness of the bead being greater than the thickness of the articulated section, as recited in claim 17. As explained above, these features are important for providing an articulated section that can localize the swivel movement or articulation between the relatively stiff members at the joint, rather than spreading out the movement across the annular stiffening element as a whole. See, e.g., page 2, lines 17-19; paragraph [006]; Figure 2.

In determining the differences between the prior art and the claims, the question under 35 U.S.C. 103 is not whether the differences themselves would have been obvious, but whether the claimed invention as a whole would have been obvious. (M.P.E.P. § 2141.02(I)).

Appellants respectfully submit that one of ordinary skill in the art would not have been motivated to modify the Kim et al reference in the manner alleged in order to arrive at the claimed invention as a whole.

The Kim et al reference very clearly does not teach or suggest the features of claim 17. Indeed, the Office Action specifically acknowledges that the Kim et al reference fails to teach the beaded section 513 being located on the central collar ring 512. However, the Office Action asserts that it would have been obvious “to place a stiffening bead on the central ring spaced away from the edge (thus the articulated section would fall between the bead and the nose, since the articulated section is the area of the central ring meeting up with the [nose] section) in apparatus [the Kim et al. reference] to yield the predictable results of helping to prevent the deformation of the central collar ring.”

Appellants respectfully submit that the Office Action fails to establish a reasonable rationale for making the alleged modification to the Kim et al. reference. Indeed, the Office Action fails to explain how placing the stiffening bead on the central ring spaced away from the edge (in which the articulated section allegedly would fall between the bead 513 and the nose 532) would “prevent the deformation of the central collar ring” since the portion between the bead 513 and the nose 532, as modified by the rejection, is part of the central collar ring

and therefore clearly would not prevent deformation of the central collar ring if it articulated in the manner alleged.

Hence, one of ordinary skill in the art would not have had an apparent reason to modify the Kim et al reference in the manner alleged to arrive at the claimed invention. As explained above, when properly considered as a whole, the collar of the Kim et al. reference clearly spreads or evenly distributes the movement of the collar over the collar as a whole, rather than localizing the movement of the collar to an articulated section, as in the claimed invention. See, e.g., specification at paragraphs [006] and [015].

Thus, the Kim et al. reference does not render obvious the features of claims 17-19.

The Examiner's Answer dated September 24, 2010

Contrary to the assertions in the Examiner's Answer, Appellants respectfully submit that it would not have been obvious to one of ordinary skill in the art to place a bead on the central collar ring of the gasket of the Kim et al. reference, and that doing so would not yield the allegedly predictable result of preventing deformation of the central collar ring of the Kim et al. reference.

The Examiner's Answer fails to establish a reasonable rationale for making the alleged modification to the Kim et al. reference. Particularly, the Examiner's Answer fails to explain how placing the stiffening bead on the central ring spaced away from the edge (in which the articulated section allegedly would fall between the bead 513 and the nose 532) would "prevent the deformation of the central collar ring" since the portion between the bead 513 and the nose 532, as modified by the rejection, is part of the central collar ring. Therefore, the alleged modification of the central collar ring clearly would cause deformation of the central collar ring if it were articulated in the manner alleged, not prevent deformation of the central collar ring as stated in the rationale for the rejection.

Hence, one of ordinary skill in the art would not have had an apparent reason to modify the Kim et al reference in the manner alleged to arrive at the claimed invention. As explained above, when properly considered as a whole, the collar of the Kim et al. reference clearly spreads or evenly distributes the movement of the collar over the collar as a whole,



rather than localizing the movement of the collar to an articulated section, as in the claimed invention. See, e.g., specification at paragraphs [006] and [015].

For the foregoing reasons, the Kim et al reference fails to disclose or suggest the features of the claimed invention wherein the annular stiffening element includes a bead disposed on the central collar ring, and wherein the articulated section is disposed between the bead and the nose, the thickness of the bead being greater than the thickness of the articulated section, as recited in claim 17. As explained above, these features are important for providing an articulated section that can localize the swivel movement or articulation between the relatively stiff members at the joint, rather than spreading out the movement across the annular stiffening element as a whole. See, e.g., page 2, lines 17-19; paragraph [006]; Figure 2.

Thus, the Kim et al. reference does not render obvious the features of claims 17-19. Appellants respectfully requests reversal of these rejections.

- c. Claims 9 and 22 are NOT unpatentable under 35 U.S.C. § 103(a) over the Kim et al reference and the Deuring reference (U.S. Patent No. 4,826,180)

Claims 9 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over the Kim et al reference in view of the Deuring reference.

Appellants respectfully traverse this rejection.

For at least the reasons set forth above, the alleged modification of the Kim et al reference would not have been obvious and would not teach or suggest all of the features of independent claims 8 and 14. The Deuring reference does not remedy the deficiencies of the Kim et al reference. Indeed, Appellants respectfully submit that the Deuring reference clearly is non-analogous art.

To qualify as analogous art, a reference must either be (1) within the field of Applicants endeavor, or if not, (2) the subject matter logically would have commended itself

to an inventor's attention in considering his or her invention as a whole. See M.P.E.P. § 2141.01(a)(I) citing *KSR International Co. v. Teleflex Inc.*, 82 USPQ2d 1385, 1397 (2007).

The Office Action dated May 6, 2010, responds to Appellants' traversal arguments regarding the Deuring reference being non-analogous art by noting that it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with **which the appellant was concerned**, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). The Office Action then alleges that the Deuring reference teaches solving the same problem as **the Kim et al reference** of strengthening a flexible seal member, and that it would have been obvious to have vulcanized a metal ring as taught by the Deuring reference into the flexible sealing collar of the Kim et al. reference to have strengthened the collar.

Appellants respectfully submit that the Response to Arguments does not answer the substance of Appellants arguments because the Office Action does not provide any rationale explaining how the Deuring reference is reasonably pertinent to the particular problem with **which the appellant was concerned**. Rather, the Office Action appears to erroneously allege that the Deuring reference is analogous art because it allegedly would have been obvious to modify the Kim et al. reference for the problem identified in the Kim et al. reference, NOT for the problems with which Appellants' invention was concerned.

As explained above, to qualify as analogous art, a reference must either be (1) within the field of Applicants endeavor, or if not, (2) the subject matter logically would have commended itself to an inventor's attention in considering his or her invention (i.e., ***Applicants' invention***) as a whole. See M.P.E.P. § 2141.01(a)(I) citing *KSR International Co. v. Teleflex Inc.*, 82 USPQ2d 1385, 1397 (2007); see also *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992).

In the present instance, the Deuring reference clearly is NOT within the field of Applicants' endeavor. The field of Applicants' endeavor is the field of washing machines, and more particularly, bellows-type collars for washing machines. In stark contrast, the Deuring reference is within the completely different and unrelated field of valve stem sealing

assemblies for internal combustion engines. For at least the foregoing reasons, the Deuring reference clearly is NOT within the field of Applicants' endeavor.

As set forth above, a reference that is not within the field of Applicants endeavor may qualify as analogous art if the subject matter logically would have commended itself to an inventor's attention in considering his or her invention as a whole. See M.P.E.P. § 2141.01(a)(I) citing *KSR International Co. v. Teleflex Inc.*, 82 USPQ2d 1385, 1397 (2007).

In the present instance, the subject matter of the Deuring reference logically would *not* have commended itself to an inventor's attention in considering Applicants' invention as a whole.

Properly considered as a whole, the present invention is directed to providing an annular stiffening element to the visible inner collar ring, which reduces any spreading of deformation forces from the central and outer collar ring on to the inner collar ring, thereby reducing the deformation of the bellows-type collar that is visible to the user and reducing the accompanying noise during the operating state of a washing machine.

In stark contrast, the Deuring reference very clearly is concerned with the completely unrelated problem of facilitating the installation of valve stem seals during mass production, and for simultaneously reducing the installation costs for an assembly of valve actuating members in addition to a valve stem seal. See, e.g., col. 1, lines 44-48.

The subject matter of valve stem seals logically would *not* have commended itself to an inventor's attention in considering, as a whole, ways to reduce spreading of deformation forces from the central and outer collar ring on to the inner collar ring, thereby reducing the deformation of the bellows-type collar that is visible to the user and reducing the accompanying noise during the operating state of a washing machine.

For at least these reasons, the subject matter of the Deuring reference logically would *not* have commended itself to an inventor's attention in considering his or her invention as a whole, and therefore, the Deuring reference does not qualify as analogous art.

None of the applied references discloses or suggests the subject matter defined by claims 9 and 22.

The Examiner's Answer dated September 24, 2010

In response to Appellants' traversal arguments, the Examiner's Answer asserts that the Deuring reference is solving the same problem as the Kim et al reference of "strengthening a flexible seal member (the bellows-type collar is the seal, where Kim et al is strengthening the seal with the annular stiffening/strengthening element, part 532)." The Examiner's Answer further asserts that the Deuring reference is solving the same problem as the Kim et al reference and Applicant of "strengthening a flexible seal," and therefore, takes the position that the Deuring reference is considered analogous art.

Contrary to the assertions in the Examiner's Answer, Appellants respectfully submit that the claimed invention is not simply solving the problem of "strengthening a flexible seal." Instead, when properly considered as a whole, the present invention is directed to providing an annular stiffening element to the visible inner collar ring, which reduces any spreading of deformation forces from the central and outer collar ring on to the inner collar ring, thereby reducing the deformation of the bellows-type collar that is visible to the user and reducing the accompanying noise during the operating state of a washing machine. Appellants respectfully submit that the Examiner's Answer improperly attempts to distill the invention down to a gist of the invention, rather than considering the invention as a whole.

Furthermore, contrary to the assertions in the Examiner's Answer, the Deuring reference also is not solving the problem of "strengthening a flexible seal." Indeed, the Examiner's Answer has not cited any support in the Deuring reference that shows that the Deuring reference is solving this alleged problem.

Instead, the Deuring reference very clearly is concerned with facilitating the installation of valve stem seals during mass production, and simultaneously reducing the installation costs for an assembly of valve actuating members in addition to a valve stem seal. See, e.g., col. 1, lines 44-48. The Deuring reference is silent with respect to the alleged problem of "strengthening a flexible seal."

The subject matter of valve stem seals logically would *not* have commended itself to an inventor's attention in considering, as a whole, ways to reduce spreading of deformation forces from the central and outer collar ring on to the inner collar ring, thereby reducing the

deformation of the bellows-type collar that is visible to the user and reducing the accompanying noise during the operating state of a washing machine.

Thus, the problem being solved by the Deuring reference very clearly is not “strengthening a flexible seal.” Additionally, the problem being solved by the Deuring reference is completely unrelated to the problems being solved by the claimed invention.

For at least these reasons, the subject matter of the Deuring reference logically would *not* have commended itself to an inventor's attention in considering his or her invention as a whole, and therefore, the Deuring reference does not qualify as analogous art.

None of the applied references discloses or suggests the subject matter defined by claims 9 and 22.

Appellants respectfully request reversal of this rejection.

(8) CONCLUSION

In view of the foregoing discussion, Appellants respectfully request reversal of the Examiner's rejections.

Respectfully submitted,

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November 10, 2010

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## CLAIMS APPENDIX

### Claims 1-7 (Canceled)

8. (Rejected) A bellows-type collar for washing machines comprising a machine housing, a lye container that is arranged therein, a cantilevered drum which is rotatably disposed in the lye container, and a frontal loading opening, wherein the bellows-type collar comprises an inner, a central and an outer collar ring and is sealingly fixed to both the machine housing and the lye container in the area of the loading opening, and the inner collar ring is visible through a closure of the loading opening, wherein an annular stiffening element comprising a thickened area of the bellows-type collar is assigned to the visible inner collar ring, which stiffening element reduces any spreading of deformation forces from the central and outer collar ring on to the inner collar ring, and a non-visible section of the bellows-type collar, wherein an articulated section is disposed in the non-visible section which promotes deformation of the bellows-type collar in said non-visible section.

9. (Rejected) The bellows-type collar according to claim 8, wherein a flexible metal ring is vulcanized at least one of on and in the bellows-type collar.

10. (Rejected) The bellows-type collar according to claim 8, wherein the stiffening element is disposed in the area of the inner collar ring which lies closest to the drum neck of the drum.

11. (Canceled)

12. (Rejected) The bellows-type collar according to claim 8, wherein the articulated section is formed by a thinner-material area between two thickened areas of the bellows-type collar.

13. (Rejected) The bellows-type collar according to claim 8, wherein the articulated section in the non-visible section of the bellows-type collar directly adjoins the stiffening element.

14. (Rejected) A washing machines comprising:

a housing;

a lye container supported within the housing;

a cantilevered drum disposed within the lye container and mounted for rotation with respect to the lye container; and

a frontal loading opening in the housing providing access to the drum; and

a bellows-type collar at least partially surrounding the frontal loading opening,  
the bellows-type collar comprising:

an inner collar ring including an inner fixed edge coupled to the housing and extending inwardly toward the drum to an inner free edge;

an outer collar ring disposed radially outwardly from the inner collar ring and including an outer fixed edge sealingly coupled to the lye container and extending outwardly toward the housing to an outer free edge;

a central collar ring extending between the inner free edge and the outer free edge; and

an annular stiffening element including an articulated section disposed near the inner free edge and restricting the spread of deformation forces from the central and outer collar ring on to the inner collar ring.

15. (Rejected) The washing machine according to claim 14, wherein the annular stiffening element includes a nose with a thickened area disposed at the inner free edge near the intersection of the inner collar ring and the central collar ring, at least a portion of the inner collar ring having a thickness being less than the thickness of the nose.

16. (Rejected) The washing machine according to claim 15, wherein the thickened area of the nose extends radially outwardly from the inner collar ring providing the inner collar ring with a radially inwardly facing surface being substantially uniform and uninterrupted.

17. (Rejected) The washing machine according to claim 15, wherein the annular stiffening element includes a bead disposed on the central collar ring, and wherein the articulated section



is disposed between the bead and the nose, the thickness of the bead being greater than the thickness of the articulated section.

18. (Rejected) The washing machine according to claim 17, wherein the thickness of the nose is greater than the thickness of the articulated section.

19. (Rejected) The washing machine according to claim 17, wherein at least a portion of the central collar ring disposed between the bead and the outer free edge includes a thickness being less than the thickness of the bead.

20. (Allowable)

21. (Rejected) The washing machine according to claim 14, wherein the inner collar ring and outer collar ring extend in directions substantially parallel to one another and the central collar ring extends in a direction substantially diagonal with respect to the inner and outer collar rings.

22. (Rejected) The washing machine according to claim 14, wherein the bellows-type collar includes a flexible vulcanized metal ring is vulcanized.

EVIDENCE APPENDIX

None

RELATED APPEALS APPENDIX

None